

July 20, 2015 Daily Report

(Presenting July 19 Progress and Plans Forward)

Refugio Incident

This daily report addresses elements listed in the *Order for Removal, Mitigation or Prevention of a Substantial Threat of Oil Discharge*. The elements include descriptions of 1) anticipated problems and planned resolutions, 2) significant developments, 3) work performed, 4) treatment and disposal information, 5) analytical data received, and 6) schedule of work. The following attachments contain detailed information pertaining to each listed element:

- **Summary of Anticipated Problems and Resolutions** (July 20)
 - Anticipated problems and planned resolutions
- **Daily Progress Report** (describing prior day, July 19)
 - Significant Developments
 - Work Performed
 - Disposal Information
- **CTEH Summary of Environmental Sampling Efforts** (as issued on July 14)
 - Due to the UC-approved reduction of surface water sampling frequency from daily to once per week, environmental summaries will be distributed once per week moving forward
- **Incident Action Plan** (Effective July 10 06:01 – August 12 6:00)
 - Schedule of Work to be Performed (Form 204)

Summary of Anticipated Problems and Resolutions

Refugio Incident

July 20, 2015

Anticipated Problems	Planned Resolutions
<ul style="list-style-type: none">• Section 4 backfill and access to beach is very congested.	<ul style="list-style-type: none">• Reduce foot print to only essential personnel.
<ul style="list-style-type: none">• Limited beach access due to tides.	<ul style="list-style-type: none">• Continue with scheduling flexibility to allow work crews to adjust work location based on beach accessibility.
<ul style="list-style-type: none">• High waves and tides due to Hurricane Delores.	<ul style="list-style-type: none">• Limited beach crews to only 2 crews on the 19th and 20th. Will only work in area where it is safe to do so.
<ul style="list-style-type: none">• Cleanup on some areas of the beach will be limited due to safety concerns.	<ul style="list-style-type: none">• Evaluate the use of additional safety precautions in areas of concern, engineering controls, additional PPE, etc.
<ul style="list-style-type: none">• Significant length of time to clean Beach Section 15 due to large rock scrapping.	<ul style="list-style-type: none">• Investigate the possibility of flying in dry ice blasting equipment.

Incident Command Post Santa Barbara
Refugio Oil Spill
Unified In All Missions
July 19, 2015
Response Day 62

Daily Progress Report

The ICP is currently overseeing operations in Santa Barbara County. Active field operations are ongoing in Santa Barbara Division I. Section 5 ops completed today. Crews were minimized today and tomorrow in anticipation of weather.

Safety

- Work site accidents / mishaps resulting in property damage or injuries to responders beyond First Aid:
 - 11 Recordable Injuries to date related to this response.

Environmental

Shoreline Cleanup Assessment Techniques (SCAT) Phase II end points have been achieved for 91.4% of the overall impacted shoreline and 1.9% remains active for recovery operations. The remaining 6.7% is being actively monitored by response personnel. The graphic below provides a summary of SB Divisions I, J and K. See the attached map for additional information.

Waste Management data

Waste Management (26 June – 19 July 2015)		
Material	Estimated Daily Total Removed (cubic yards)	Estimated Cumulative Total Removed (cubic yards)
Oiled Sand	15	1155
Oiled Vegetation	15	870
Oiled Debris/PPE	15	1545
Oiled Soil	0	7812
Culvert Soil	0	2000
Absorbent	0	345

Operations

- Command Objectives achieved: NSTR

Severe weather conditions that may impact operations: MOISTURE FROM TROPICAL STORM DOLORES WILL BRING WARM AND HUMID CONDITIONS TO THE AREA THROUGH MONDAY...ALONG WITH PLENTY OF CLOUDS AND SCATTERED THUNDERSTORMS AT TIMES. LESS HUMID CONDITIONS WILL RETURN BY MID WEEK AS THE TROPICAL AIRMASS MOVES EAST...WITH TEMPERATURES NEAR SEASONAL NORMS THROUGH THE END OF THE WEEK.

THE REMNANT LOW FROM DOLORES IS EXPECTED TO BE LOCATED 70 NM W OF SAN NICOLAS ISLAND BY MONDAY EVENING WITH GUSTS TO 25 KT. SWELLS ORIGINATING FROM THE LOW CENTER FROM REMNANTS OF DOLORES WITHIN GALE FORCE WINDS OFF CENTRAL BAJA EARLY THIS MORNING ARE

EXPECTED TO ARRIVE TONIGHT. THE SWELL WILL REMAIN BELOW ADVISORY CONDITIONS BUT WILL LIKELY CREATE EXTRA CURRENTS AND SURGING TONIGHT THROUGH MONDAY. ONCE AGAIN, THE CDIP PROJECTS COASTAL WAVES IN THE OPERATING AREA TO BE IN THE 5 FOOT RANGE.

- Deviation of strategies or tactics from approved Incident Action Plan: NSTR
- Major equipment failures that impact operations: NSTR
- Change to or need for additional road closures: Closures continue on Hwy 101 Southbound through Jul 26.
- Cultural / historical impacts and/or concerns: NSTR

Wildlife: Four of the seven CA sea lions from the Refugio incident cleared for return have had some health issues flare back up so the veterinary team took them off of the approved list. Three CA sea lions were released yesterday. SeaWorld has received a standing request from CNN (LA Bureau) to cover the return of the marine mammals.

Current as of:	TOTAL Birds			Birds Released	TOTAL Mammals		
18 July	Live	Dead	Total	Total	Live	Dead	Totals
Cumulative Total	57	195	252	42	62	106	168

NOTE- Wildlife Branch field recovery operations and Command Post presence have been demobilized. Care for oiled wildlife continues off-site with oversight by the Wildlife Branch Director also working remotely. Wildlife numbers will be updated in the future only to add to numbers of animals released, or if corrections to previous numbers are required based on continuing review of records.

Liaison

- Any VIP visits or political interests and concerns: Reports of negative stakeholder interests: NSTR
- Cultural / historical impacts and/or concerns: NSTR

Public Information

- Publication of significant media issues: NSTR

Logistics

- Change in status for any Incident facilities: NSTR

Personnel Involved

- 171 workers are engaged in Field Operations.
- 26 personnel are assigned to the ICP.
- 197 total personnel are assigned to the response.

Refugio Incident Summary of CTEH® Environmental Sampling Efforts July 14, 2015

As part of response efforts, CTEH® began collecting product and environmental samples, i.e., water and/or sediment, on May 20, 2015. This environmental sampling has been conducted under a Unified Command-approved sampling plan. This report contains environmental sampling efforts completed to date by CTEH® in support of Refugio Incident response efforts. **Table 1**, below, provides a sample count for each type of environmental media collected by CTEH®. **Table 2** provides a summary of TPH¹ data reported in water samples to date. Maps of environmental sampling locations are provided as attachments.

Table 1: Environmental Preliminary Sample Summary
05/20/2015– 07/13/2015

Media	Matrix	Sample Count
Water	Surface Water	275
	Water Column	54
	Culvert/Flush Water	9
Sediment	Beach Sediment ²	67
	Ocean Sediment ³	15
Soil	Potential Backfill Soil/Sand	51
	Section Four Soil	39
	Trench Excavation/Section One Soil	63
	Section Two/Three Soil	9
	Section 1 Background Soil	20
	Section 4 Background Soil	20
Petroleum	Product/Tar Ball Sample	214
	Sheen/Seep	14

² Beach sediment samples are collected from both the intertidal zone and on dry sand above the intertidal zone.

³ Ocean sediment samples were collected at the same location as the water column samples.

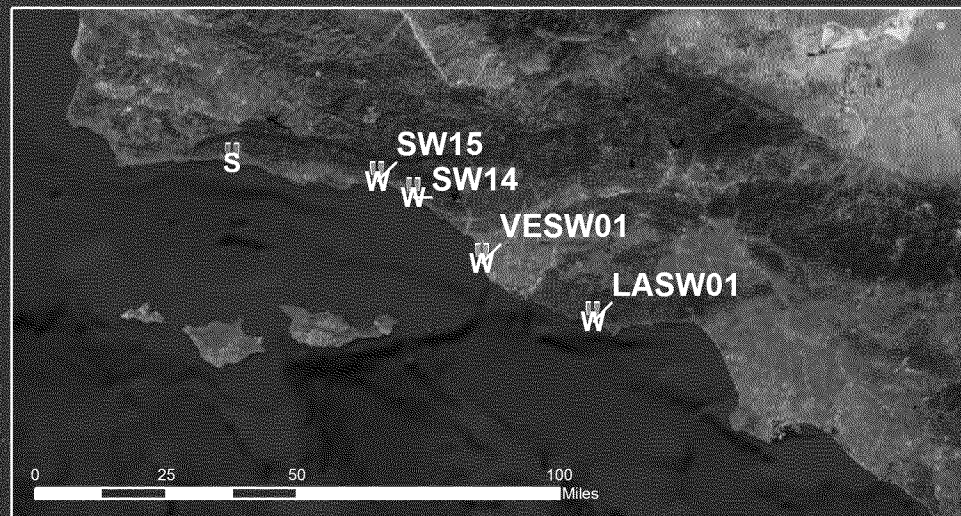
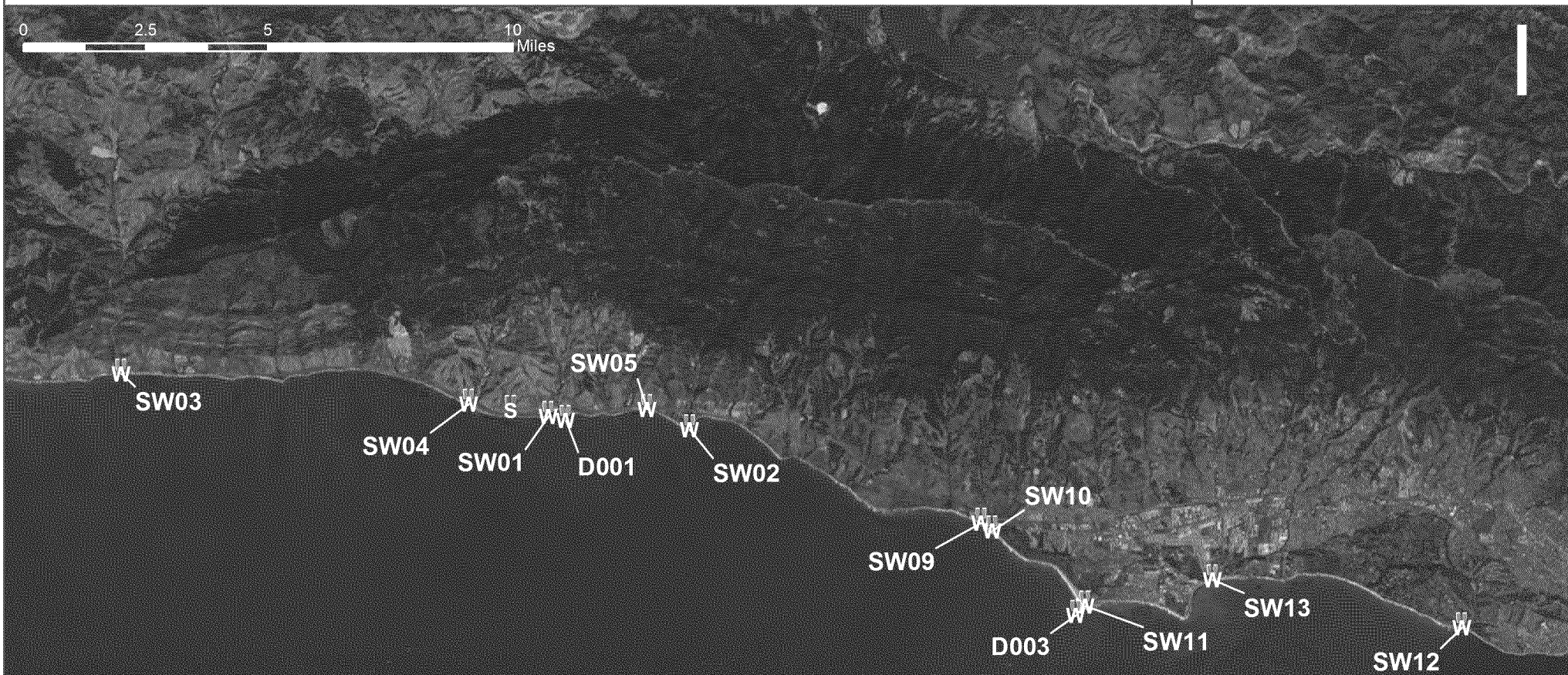
¹ For the purposes of this report, TPH represents a summation of TPH-Oil Range Organics (ORO), TPH-Diesel Range Organics (DRO), and TPH-Gasoline Range Organics (GRO).

Table 2: TPH¹ Preliminary Data Summary⁴
05/20/2015– 07/13/2015

	Location	Highest Detection		Most Recent TPH Result Received	
		Date	TPH (mg/L)	Date	TPH (mg/L)
Water Column	D001-S	6/6/2015	0.228	6/6/2015	0.228
	D001-M	5/22/2015	0.1	6/6/2015	ND
	D001-D	6/3/2015	0.5	6/6/2015	ND
	D003-S	5/31/2015	0.189	6/1/2015	ND
	D003-M	No detections		6/1/2015	No detections
	D003-D	No detections		6/1/2015	No detections
Surface Water	SW01	5/26/2015	11.9	6/29/2015	0.0837
	SW02	5/21/2015	677.111	6/29/2015	0.1761
	SW03	5/26/2015	4.9	6/29/2015	0.0581
	SW04	6/14/2015	16.6	6/29/2015	0.0646
	SW05	6/3/2015	63.1	6/29/2015	0.39
	SW09	6/5/2015	6.9	6/28/2015	0.0714
	SW10	5/21/2015	1.89	5/21/2015	1.89
	SW11	6/6/2015	2.3422	6/28/2015	0.068
	SW12	6/10/2015	5.1	6/28/2015	0.0782
	SW13	6/6/2015	1.9	6/28/2015	0.13
	SW14	No detections		6/9/2015	No detections
	LASW01	No detections		6/8/2015	No detections
	VESW01	No detections		6/9/2015	No detections

⁴ The data presented within the table is considered preliminary and has not completed the complete QA/QC process.

0 2.5 5 10 Miles

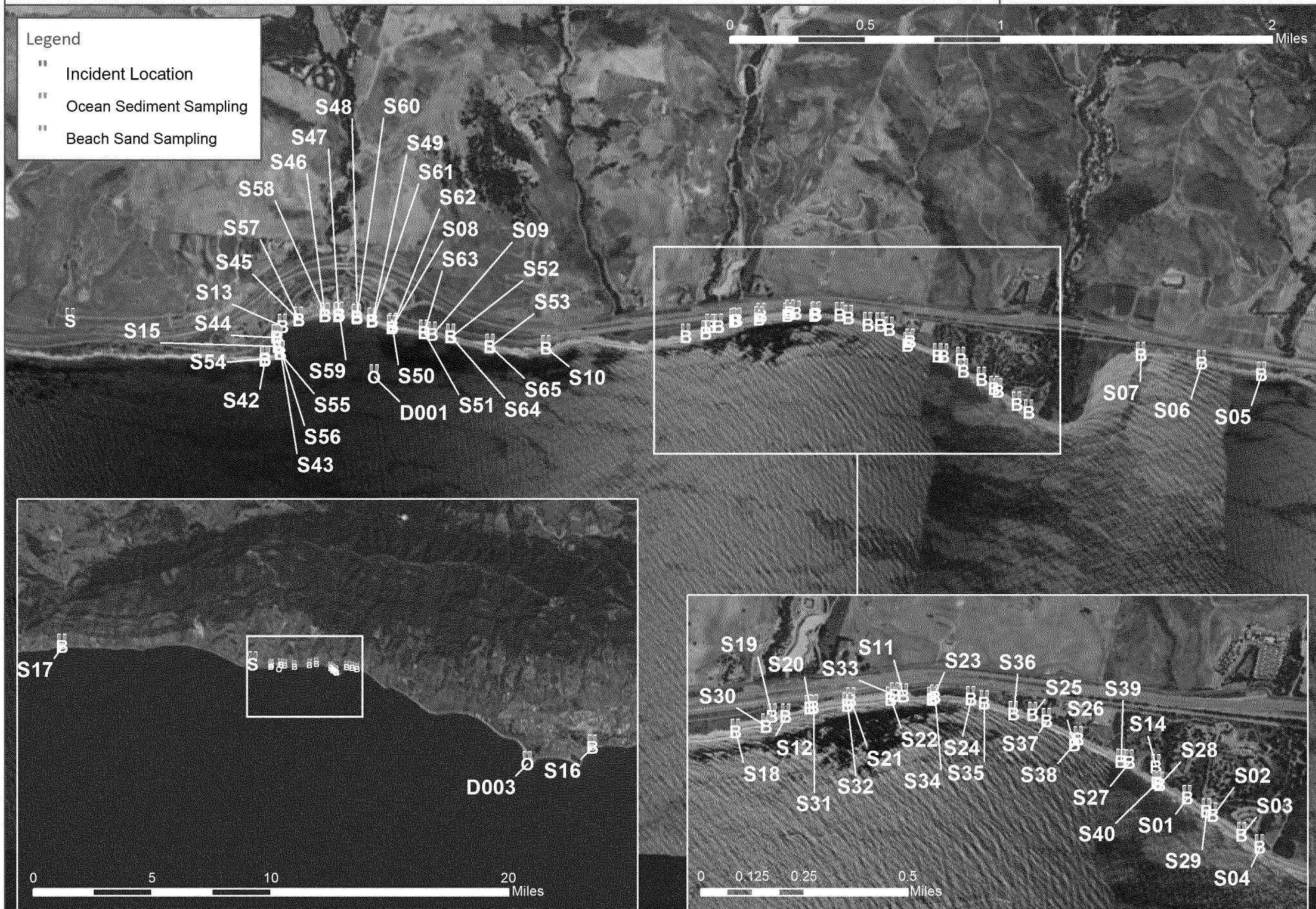


Legend

- || Incident Location
- ||| Water Column Sampling Location
- ||| Surface Water Sampling Location

Legend

- " Incident Location
- " Ocean Sediment Sampling
- " Beach Sand Sampling



ORIGINAL

1. Incident Name Refugio Incident	2. Operational Period to be covered by IAP (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00	Operational Period Ops Period 21	CG IAP COVER SHEET
3. Approved by			
ORG	Name		
USCG	Captain J. Williams <i>J. Williams, CAPT</i>		
U.S. EPA	M. Waldon <i>M. Waldon</i>		
CAL DFW	Capt. M. Crossland <i>Capt. M. Crossland</i>		
Plains	P. Hodgins <i>P. Hodgins</i>		
SBCOEM	R. Troy Rockbrand <i>R. Troy Rockbrand</i>		

INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

☒ ICS 202-OS (Response Objectives)

☒ ICS 203-OS (Organization List) - or - ICS 207-OS (Organization Chart)

☒ ICS 204-CGs (Assignment Lists) One Copy each of any ICS 204-CG attachments

☐ ICS 205-CG (Communications Plan)

☒ ICS 206-CG (Medical Plan)

☒ ICS 208-CG (Site Safety Plan) or Note SSP Location Located at CP and Staging Areas

☒ Map/Chart

☒ Weather forecast/Tides/Currents

Other Attachments

Incident Picture



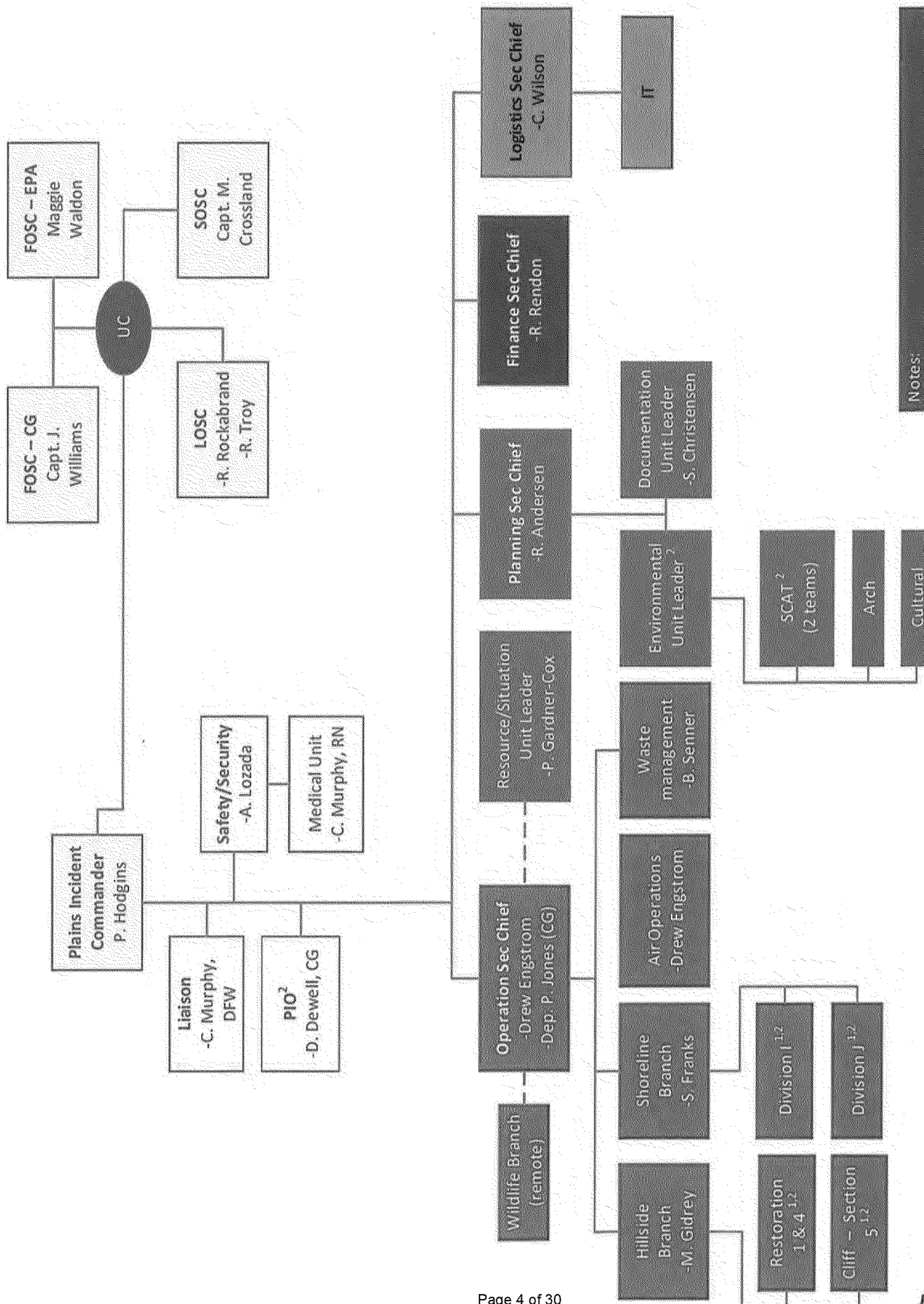
ORIGINAL

4. Prepared by T. Haug/R.Andersen	Date / Time 07/09/2015 14:20
CG IAP COVER SHEET	07/09/2015 15:29
(Rev. 4/04)	

ORIGINAL

1. Incident Name Refugio Incident	2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00	Operational Period Ops Period 21	INCIDENT BRIEFING ICS 202-CG
3. Objective(s) Ensure the safety of response personnel and the public. Pending acceptable soil sample results, initiate backfill and remediation plans in Sections 1 and 4. Continue the clean up of all open Divisions, maximizing clean up during optimal tidal periods, in accordance with the Shoreline Treatment Recommendations to meet Phase II endpoints. Implement Section 5 actions in accordance with "Section 5 Cliff Face Area Evaluation of Potentially Feasible Remedial Options." Protect and minimize impacts to environmental, cultural, historic and economic resources where feasible. Continue to care for and monitor the disposition of previously captured, injured and oiled wildlife. Continue to provide stakeholders and the community relevant information about progress of response efforts. Complete and implement Phase 3 Plan when deemed appropriate by the Unified Command.			
4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions) Clean to phase 2 endpoints where possible. Implement Decon and Demob as operations permit. Continue to integrate local jurisdictional agencies with operations associated with Sections 1 thru 5. Continue to emphasize safety in all operations with an emphasis on Sections 4 and 5. Return State Parks to full use as soon as possible. Maintain cultural/historical coordination for all operations and SCAT sign-offs. Identify or list the segments requiring phase 3 monitoring. Provide daily progress reports			
Approved Site Safety Plan Located at the Goleta ICP Situation Status wall			
Prepared by T. Haug/R. Andersen		Date/Time 07/09/2015 12:50	
INCIDENT OBJECTIVES		07/09/2015 16:49 Page 2 of 30	

1. Incident Name Refugio Incident	2. Operational Period (Date/Time) From: 10Jul2015/0600 To: 12Aug2015/0600	Critical Information Requirements ICS 202B
3. Critical Information Requirements: <ul style="list-style-type: none"> A. Work site accidents / mishaps resulting property damage or injuries to responders beyond first aid. B. Major equipment casualties. C. Any VIP visits or political interest and concerns. D. Command Objectives achieved. E. Deviation of strategies or tactics from approved Incident Action Plan. F. Severe weather condition which could impact Operations. G. Publication of inaccurate, significant, or unfavorable media stories. H. Reports of negative stakeholder interests. I. Cultural/historical impacts and/or concerns. J. Change in status for any Refugio Incident facilities. K. Change to or need for additional road closures. 		
4. Prepared by: (RESL) Pete Gardner-Cox		Date/Time 09 July 2015 / 1500



Notes:
 1 - Each division will have Cultural and ARCH on site as indicated in IC-2045.
 2 - personnel will be on a rotational duty schedule. See attached schedule.

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1. Incident Name Refugio Incident		2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00		Operational Period Ops Period 21	Assignment List ICS 204-CG
3. Branch Wildlife Branch		4. Division/Group/Staging Wildlife Rehab Group			
Task Force/Strike Team		Team			
5. Operational Personnel		Name	Affiliation	Contact#(s)	
Operations Section Chief		Drew Engstrom	Plains All American Pipeline	307-251-6932	
Branch Director		Holly Gellerman (remote)	CA DFW OSPR	916-747-0611	
Division/Group Supervisor/STAM		Mike Ziccardi/Sarah Wilkin (remote)	OWCN/NOAA	530-979-7561	
6. Resources Assigned 'X' indicates 204a attachment with additional instructions					
Qty x Size (Unit)	Strike Team/Task Force/Resource Identifier	Leader	Contact#	# Of Persons	Notes
1 (each)	Care/Processing Group - Birds	C. Fiorello	530-979-0380	4	See work assignment and special instructions <input type="checkbox"/>
1 (each)	Care/Processing Group - Mammals	J. Westberg	858-229-5639	8	See work assignment and special instructions <input type="checkbox"/>
1 (each)	Care Facility			2	<input type="checkbox"/>
7. Work Assignments					
Care/Processing - Document oiling status, conduct intake examinations, necropsy dead animals, provide pre-wash care, clean oil from affected animals, return animals to normal function, and release in clean environment.					
8. Special Instructions					
Attend morning safety and planning briefing. Immediately report any injury to supervisor and complete an injury report form.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
Name/Function	Radio Freq./System/Channel		Phone	Cell/Pager	
Emergency Communications					
Medical:		Evacuation:		Other:	
10. Prepared By P. Gardner-Cox		Date/Time 07/09/2015 12:45	11. Reviewed By (PSC) T. Haug/R. Andersen	Date / Time	12. Reviewed By (OSC) Drew Engstrom
ASSIGNMENT LIST		07/09/2015 15:38		ICS 204-CG (Rev.10/07)	

1. Incident Name Refugio Incident		2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00		Operational Period Ops Period 21	Assignment List ICS 204-CG
3. Branch		4. Division/Group/Staging Law - Security Group			
Task Force/Strike Team		Team			
5. Operational Personnel		Name	Affiliation	Contact#(s)	
Operations Section Chief		Drew Engstrom	Plains All American Pipeline	307-251-6932	
Branch Director					
Division/Group Supervisor/STAM		A . Lozada	Plains All American Pipeline	701-440-1643	
6. Resources Assigned 'X' indicates 204a attachment with additional instructions					
Qty x Size (Unit)	Strike Team/Task Force/Resource Identifier	Leader	Contact#	# Of Persons	Notes
1 (each)	Law Enforcement Task Force	Rob Plastino	805-268-4035	10	Sheriff, State Parks, HCP, Fish and Wildlife <input checked="" type="checkbox"/>
1 (each)	SB County Sites Task Force	Keith Radcliff	903-721-5030	37	Refugio State Park, Excavation Site, Gaviota, Las Veras <input type="checkbox"/>
1 (each)	ICP Security	Ben Poch	318-218-6888	4	ICP <input type="checkbox"/>
1 (each)	Technician to replace security guard				<input type="checkbox"/>
7. Work Assignments					
Prevent unauthorized persons from entering or remaining in the spill area, staging areas, and the ICP. Contact and identify all persons not readily identifiable. Escort any unauthorized person from the area.					
Land units- Contact any unidentified vehicle parked in the area with emphasis on highway 101 where access to the beach can be made. Remove all unauthorized persons and vehicles. Do not loiter on or around the railway.					
8. Special Instructions					
Identify any persons or vessels that may need decontamination. Personnel are reminded to stay hydrated and work rest regimen as necessary.					
SAFETY MESSAGE					
All response personnel are to be cautious of moving vehicles at all times and look in all directions before proceeding. Response personnel should be aware that all railroad tracks are in active use and should show extreme caution when operating in vicinity of tracks.					
HISTORICAL/CULTURAL GUIDELINES					
<ul style="list-style-type: none"> • Leave cultural materials in place at the site of discovery, and mark its location. • Stop clean-up work in the vicinity surrounding the site, within a 6ft radius. • Immediately inform the field supervisor, who in turn, should immediately inform the FOSC and/or an appropriately designated cultural resource specialist. Obtain/provide location on map by indicating latitude/longitude. 					
Report All injuries require a immediate notification to Direct Supervisor.					
In the event a scheduled meal is not made available to your crew, report this immediately to your Branch Director and the Logistics Section Chief.					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
Name/Function	Radio Freq./System/Channel		Phone	Cell/Pager	
Emergency Communications					
Medical:	911	Evacuation:	911	Other:	911
10. Prepared By	Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC)	Date / Time
P. Gardner-Cox	07/09/2015 14:00	T. Haug/R. Andersen		D. Engstrom	
ASSIGNMENT LIST		07/09/2015 15:32		ICS 204-CG (Rev.10/07)	

1. Incident Name Refugio Incident		2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00		Operational Period Ops Period 21	Assignment List ICS 204-CG
3. Branch		4. Division/Group/Staging Pipeline Section 1 - 4			
Task Force/Strike Team		Team			
5. Operational Personnel		Name	Affiliation	Contact#(s)	
Operations Section Chief		Drew Engstrom	Plains All American Pipeline	307-251-6932	
Branch Director					
Division/Group Supervisor/STAM		Branch Dir - M. Guidrey	Plains All American Pipeline	337-526-8539	
6. Resources Assigned 'X' indicates 204a attachment with additional instructions					
Qty x Size (Unit)	Strike Team/Task Force/Resource Identifier	Leader	Contact#	# Of Persons	Notes
1 (each)	Section 1/2/3/4 Task Force	Ryan Crider	504-214-7657	0	<input type="checkbox"/>
1 (each)	Excavation Task Force	EPA Rep		0	<input type="checkbox"/>
1 (each)	Crane			0	<input type="checkbox"/>
7. Work Assignments					
<p>Excavation Task force will carry out operations to meet established endpoints.</p> <p>Section 1-4 Task Force Shall:</p> <ul style="list-style-type: none"> -Conduct removal operations of oil and contaminated solid waste in accordance with the approved Section Plan. -All lifting operations will be conducted in accordance with the UC approved Lift Plan. <p>Sample according to the approved Sample Confirmation Plan for Sections 1 thru 4.</p> <p>---</p> <p>Follow "Excavation Backfill and Site Restoration Plan" 6/24/15 once environmental receives satisfactory results from data analysis.</p> <p>Plains Environmental Contact, Chris Lauer, 832-904-5247.</p> <p>Once backfill is to the point of culvert installation, contact Chris Lauer prior to commencing work.</p>					
8. Special Instructions					
<p>Excavation Task Force</p> <p>Safety Officers shall be present during operations</p> <p>Prior to excavations archeologist shall be consulted and if there are any cultural or historic resource concerns, archeologist shall be present to monitor the operations</p> <ol style="list-style-type: none"> 1. A minimum of 25 feet from the potential release locations shall be maintained 2. All recovered oil shall be quantified and disposed of in accordance with the waste management plan. <p>HAZARD MITIGATION</p> <ul style="list-style-type: none"> -All personnel operating shall wear level D (hard hats, safety toe boots, safety glasses). -All personnel are reminded to stay hydrated and take breaks as needed. - Notify Assistant Safety Officer if safety issues arise. <p>SAFETY MESSAGE</p> <p>All response personnel are to be cautious of moving vehicles at all times and look in all directions before proceeding. Response personnel should be aware that all railroad tracks are in active use and should show extreme caution when operating in vicinity of tracks.</p> <p>HISTORICAL/CULTURAL/ENVIRONMENTAL GUIDELINES</p> <ul style="list-style-type: none"> • Leave cultural materials in place at the site of discovery, and mark its location. • Stop clean-up work in the vicinity surrounding the site, within a 6ft radius. • Immediately inform the field supervisor, who in turn, should immediately inform the FOSC and/or an appropriately designated cultural resource 					
10. Prepared By P. Gardner-Cox		Date/Time 07/09/2015 15:00	11. Reviewed By (PSC) T. Haug/R. Andersen	Date / Time	12. Reviewed By (OSC) D. Engstrom
ASSIGNMENT LIST		07/09/2015 15:33		ICS 204-CG (Rev.10/07)	

specialist. Obtain/provide location on map by indicating latitude/longitude.

- Wildlife - Depending on depth of trench/excavation consult with ENV Unit regarding covering at night to reduce entrapment of animals and/or exposure to contaminants.

An Archaeologist will periodically spot check, but full time archaeological monitoring is not necessary. The following activities DO NOT require full time archaeological monitoring:

1. Cleaning tar balls from the beach surface.
2. Cleaning oil/tar from cobbles on the beach.
3. Cleaning oil/tar from bedrock at the back edge of the beach.
4. Cleaning oil/tar from rocks and bedrock that protrude from the beach.

Cultural protocols will remain unchanged.

(dtd 23 Jun 15)

POC to schedule/request ARCH is the following:

Clay Lebow: July 9 - July 13 (805-895-2958)

Jay Lloyd: July 13 - July 20 (559-287-2137)

Ann Munns: July 20 - July 27 (805-451-5825)

Clay Lebow: July 27 - August 3 (805-895-2958)

Jay Lloyd: August 3 - August 10 (559-287-2137)

Report All Injuries require a immediate notification to Direct Supervisor.

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio Freq./System/Channel	Phone	Cell/Pager
Emergency Communications			

Medical: **Evacuation:** **Other:**

10. Prepared By	Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC)	Date / Time
P. Gardner-Cox	07/09/2015 15:00	T. Haug/R. Andersen		D. Engstrom	
ASSIGNMENT LIST		07/09/2015 15:33		ICS 204-CG (Rev.10/07)	

1. Incident Name Refugio Incident		2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00		Operational Period Ops Period 21	Assignment List ICS 204-CG
3. Branch		4. Division/Group/Staging Section 5			
Task Force/Strike Team		Team			
5. Operational Personnel		Name	Affiliation	Contact#(s)	
Operations Section Chief		Drew Engstrom	Plains All American Pipeline	307-251-6932	
Branch Director					
Division/Group Supervisor/STAM		Branch Dir - M. Guidry	Plains All American Pipeline	337-526-8539	
6. Resources Assigned *X' indicates 204a attachment with additional instructions					
Qty x Size (Unit)	Strike Team/Task Force/Resource Identifier	Leader	Contact#	# Of Persons	Notes
1 (each)	Helicopter			0	<input type="checkbox"/>
1 (each)	Spider hoe			0	<input type="checkbox"/>
2 (each)	Pressure Washer			0	<input type="checkbox"/>
15 (each)	Personnel			0	<input type="checkbox"/>
1 (each)	Water pump			0	<input type="checkbox"/>
7. Work Assignments					
<p>Excavation Task force will carry out operations to meet established endpoints.</p> <p>Section 5 Task Force Shall:</p> <p>-Conduct removal operations of oil and contaminated solid waste in accordance with the UC approved "Detailed Plan Remediation of Cliff Face Area (Section 5) July 2, 2015".</p> <p>-All lifting operations will be conducted in accordance with the UC approved Lift Plan.</p> <p>---</p> <p>Follow "Plan for Remedation of Cliff Face Area" 6/24/15 along with the UC approved detailed plan (July 2, 2015).</p>					
8. Special Instructions					
<p>Excavation Task Force</p> <p>Safety Officers shall be present during operations</p> <p>When excavator has been secured, and after Air Monitors have deemed it safe to approach, archaeologist and cultural specialist will regularly monitor the operations.</p> <p>PPE will be modified Leved D; Tyvek suit, safety glasses, hard hat, hard-toed shoes. Additional modifications to PPE will be required during air lift operations (see site safety plan).</p> <p>Air Monitoring will be required throughout operations.</p> <ol style="list-style-type: none"> 1. A minimum of 25 feet from the potential release locations shall be maintained 2. All recovered oil shall be quantified and disposed of in accordance with the waste management plan. <p>See attached map showing minimization measures to implement concerning the access route to Section 5 Cliff Face. An archeologist and cultural rep will remain on site during operations to monitor traffic in order to minimize impacts to natural/cultural resources.</p> <p>The protection measures include:</p> <ol style="list-style-type: none"> 1. No pedestrian travel outside of the delineated pathways. 2. Pylons and flagging 2 feet South of toe of slope. Pedestrians are to stay South of this line. 3. No vehicles are permitted beyond the marked area (above the protective matting). 					
10. Prepared By P. Gardner-Cox		Date/Time 07/09/2015 15:00	11. Reviewed By (PSC) T. Haug/R. Andersen	Date / Time	12. Reviewed By (OSC) Drew Engstrom
ASSIGNMENT LIST		07/09/2015 15:34		ICS 204-CG (Rev.10/07)	

<p>4. Protective matting will in place before operational crews access this area.</p> <p>(dtd 5 July 2015)</p>					
<p>9. Communications (radio and/or phone contact numbers needed for this assignment)</p>					
Name/Function	Radio Freq./System/Channel	Phone	Cell/Pager		
<p>Emergency Communications</p>					
Medical:		Evacuation:		Other:	
10. Prepared By		11. Reviewed By (PSC)		12. Reviewed By (OSC)	
P. Gardner-Cox		T. Haug/R. Andersen		Drew Engstrom	
Date/Time		Date / Time		Date / Time	
07/09/2015 15:00		07/09/2015 15:34			
ASSIGNMENT LIST				ICS 204-CG (Rev.10/07)	

1. Incident Name Refugio Incident		2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00		Operational Period Ops Period 21	Assignment List ICS 204-CG
3. Branch Santa Barbara Recovery Branch		4. Division/Group/Staging Division I			
Task Force/Strike Team		Team			
5. Operational Personnel		Name	Affiliation	Contact#(s)	
Operations Section Chief		Drew Engstrom	Plains All American Pipeline	307-251-6932	
Branch Director		S. Franks	Plains All American Pipeline	713-417-8525	
Division/Group Supervisor/STAM		Division I Rotation	Plains All American Pipeline	PAAPL chart	
6. Resources Assigned *X indicates 204a attachment with additional instructions					
Qty x Size (Unit)	Strike Team/Task Force/Resource Identifier	Leader	Contact#	# Of Persons	Notes
1 (each)	DB2	Eric Nanarette	951-295-2680	16	<input type="checkbox"/>
1 (each)	DB3	Kenny Potts	909-626-9962	18	<input type="checkbox"/>
1 (each)	DB1	Chris Hernandez	661-238-6702	16	<input type="checkbox"/>
1 (each)	WCES 1	Devon Jackson	323-236-8961	50	<input type="checkbox"/>
7. Work Assignments					
<p>Conduct shoreline cleanup in segments per the respective Shoreline Treatment Recommendation (STR) unless otherwise directed by the Division Supervisor due to operational need.</p> <p>Conduct shoreline clean-up as directed as per SCAT Methodology.</p> <p>Supervisors should evaluate their entire area of responsibility and report status changes to their Branch Director on a daily basis.</p> <p>Crews may be deployed to other areas as conditions dictate.</p> <p>Your entire area of responsibility has been surveyed by SCAT.</p> <p>STR's have been established throughout your area of responsibility.</p> <p>SCAT is not required to confirm achievement of Phase 1 endpoints.</p> <p>Add 1 Biological Monitor when any cleanup operations occur in Division I, Sections SB-I-S004 or SB-I-S005.</p> <p>Dry ice blasting has been approved for all sections.</p> <p>_____</p> <p>Night Operations will be considered by OSC if tidal conditions and weather allow for safe and effective operations.</p> <p>-OPS will not coincide with the local Grunion runs on beaches.</p> <p>-Safety will adjust and increase on-site staffing to provide additional safety measures as necessary.</p> <p>-This work option will be briefed to the UC, Command, General Staff and relevant stakeholders 24 hrs in advance of operations to ensure proper safety and support is provided.</p>					
8. Special Instructions					
<p>An Archaeologist will periodically spot check, but full time archaeological monitoring is not necessary. The following activities DO NOT require full time archaeological monitoring:</p> <p>1. Cleaning tar balls from the beach surface.</p>					
10. Prepared By		Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC) Date / Time
P. Gardner-Cox		07/09/2015 12:30	T. Haug/R. Andersen	07/09/2015 12:30	Drew Engstrom
ASSIGNMENT LIST		07/09/2015 15:35		ICS 204-CG (Rev.10/07)	

2. Cleaning oil/tar from cobbles on the beach.
3. Cleaning oil/tar from bedrock at the back edge of the beach.
4. Cleaning oil/tar from rocks and bedrock that protrude from the beach.

Cultural protocols will remain unchanged.

(dtd 23 Jun 15)

POC to schedule/request ARCH is the following:

Clay Lebow: July 9 - July 13 (805-895-2958)

Jay Lloyd: July 13 - July 20 (559-287-2137)

Ann Munns: July 20 - July 27 (805-451-5825)

Clay Lebow: July 27 - August 3 (805-895-2958)

Jay Lloyd: August 3 - August 10 (559-287-2137)

See 204a for UC Clarification on working near cliffs - dtd 16 June.

ATV's not allowed in exclusion zones at El Capitan and Refugio.

Instructions for Dead Wildlife and Natural Resource Protection.

Any oiled wildlife (birds, mammals, or sea turtles) observed or incidentally collected in cleanup operations should be called in to the Wildlife Hotline at 877-823-6926.

Unknown source oil impacts should be reported to Lourdes Mahoney at 813-391-4657 (lmahony@cteh.com)

SAFETY MESSAGE

All personnel are reminded to keep hydrated and take rest breaks at a 50/10 work/rest ratio.

PPE: Hard hats, Tyvek suits, gloves, safety glass, neoprene boots. Avoid walking near waterways.

PFD's must be worn if the potential for drowning exists.

All response personnel are to be cautious of moving vehicles at all times and look in all directions before proceeding. Response personnel should be aware that all railroad tracks are in active use and should show extreme caution when operating in vicinity of tracks.

Report All Injuries require a immediate notification to Direct Supervisor.

Dry ice blasting Safety

Must utilize the following PPE: Tyvek Suit with Hood, appropriate gloves, steel-toed boots and ensure no skin is exposed. Ensure the operator of the gun has visual sight of the operator tending the machines or have someone in between to allow for stopping work when needed.

Hearing protection for all personnel within 30 feet of operation.

HISTORICAL/CULTURAL GUIDELINES

Leave cultural materials in place at the site of discovery, and mark its location.

Stop clean-up work in the vicinity surrounding the site, within a 6ft radius.

Immediately inform the field supervisor, who in turn, should immediately inform the FOSC and/or an appropriately designated cultural resource specialist. Obtain/provide location on map by indicating latitude/longitude.

In the event a scheduled meal is not made available to your crew, report this immediately to your Branch Director and the Logistics Section Chief.

No work in estuary or creek habitats without biological monitor and approval from EUL.

10. Prepared By	Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC)	Date / Time
P. Gardner-Cox	07/09/2015 12:30	T. Haug/R. Andersen	07/09/2015 12:30	Drew Engstrom	
ASSIGNMENT LIST		07/09/2015 15:35		ICS 204-CG (Rev.10/07)	

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio Freq./System/Channel	Phone	Cell/Pager
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Emergency Communications

Medical: **Evacuation:** **Other:**

10. Prepared By	Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC)	Date / Time
P. Gardner-Cox	07/09/2015 12:30	T. Haug/R. Andersen	07/09/2015 12:30	Drew Engstrom	
ASSIGNMENT LIST			07/09/2015 15:35	ICS 204-CG (Rev.10/07)	

1. Incident Name Refugio Incident		2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00		Operational Period Ops Period 21	Assignment List ICS 204-CG
3. Branch Santa Barbara Recovery Branch		4. Division/Group/Staging Division J			
Task Force/Strike Team		Team			
5. Operational Personnel		Name	Affiliation	Contact#(s)	
Operations Section Chief		Drew Engstrom	Plains All American Pipeline	307-251-6932	
Branch Director		S. Franks	Plains All American Pipeline	713-417-8525	
Division/Group Supervisor/STAM		Div Rotation	Plains All American Pipeline	PAAPL chart	
6. Resources Assigned 'X' indicates 204a attachment with additional instructions					
Qty x Size (Unit)	Strike Team/Task Force/Resource Identifier	Leader	Contact#	# Of Persons	Notes
1 (each)	PAT1	Alex Lopez	562-244-2248	50	<input type="checkbox"/>
1 (each)	PAT2	Anthony Gonzales	619-876-2360	50	<input type="checkbox"/>
7. Work Assignments					
<p>Conduct shoreline cleanup in segments per the Shoreline Treatment Recommendation (STR) unless otherwise directed by the Division Supervisor due to operational need.</p> <p>Supervisors should evaluate their entire area of responsibility and report status changes to their Branch Director on a daily basis.</p> <p>Your entire area of responsibility has been surveyed by SCAT.</p> <p>Conduct shoreline clean up in accordance with SCAT methodology.</p> <p>STR's have been established throughout your area of responsibility.</p> <p>SCAT is not required to confirm achievement of Phase 1 endpoints.</p> <p>Crews may be deployed from other areas as conditions dictate.</p> <p>Dry ice blasting of large surface rock, cobble and cliff face is approved for all areas.</p> <p>_____</p> <p>Night Operations will be considered by OSC if tidal conditions and weather allow for safe and effective operations.</p> <p>-OPS will not coincide with the local Grunion runs on beaches.</p> <p>-Safety will adjust and increase on-site staffing to provide additional safety measures as necessary.</p> <p>-This work option will be briefed to the UC, Command, General Staff and relevant stakeholders 24 hrs in advance of operations to ensure proper safety and support is provided.</p>					
8. Special Instructions					
<p>An Archaeologist will periodically spot check, but full time archaeological monitoring is not necessary. The following activities DO NOT require full time archaeological monitoring:</p> <ol style="list-style-type: none"> Cleaning tar balls from the beach surface. Cleaning oil/tar from cobbles on the beach. Cleaning oil/tar from bedrock at the back edge of the beach. Cleaning oil/tar from rocks and bedrock that protrude from the beach. <p>Cultural protocols will remain unchanged.</p>					
10. Prepared By		Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC) Date / Time
P. Gardner-Cox		07/09/2015 12:30	T. Haug/R. Andersen	07/09/2015 12:30	Drew Engstrom
ASSIGNMENT LIST		07/09/2015 15:37		ICS 204-CG (Rev.10/07)	

(dtd 23 Jun 15)

POC to schedule/request ARCH is the following:

Clay Lebow: July 9 - July 13 (805-895-2958)

Jay Lloyd: July 13 - July 20 (559-287-2137)

Ann Munns: July 20 - July 27 (805-451-5825)

Clay Lebow: July 27 - August 3 (805-895-2958)

Jay Lloyd: August 3 - August 10 (559-287-2137)

See 204a for UC Clarification on working near cliffs - dtd 16 June.

ATV's not allowed in exclusion zones at El Capitan and Refugio.

All light towers are to be facing away from the sand beach until otherwise instructed by Unified Command.

Instructions for Dead Wildlife and Natural Resource Protection.

Any oiled wildlife (birds, mammals, or sea turtles) observed or incidentally collected in cleanup operations should be called in to the Wildlife Hotline at 877-823-6926.

Unknown source oil impacts should be reported to Lourdes Mahoney at 813-391-4657 (lmahony@cteh.com)

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PFD's must be worn if the potential for drowning exists.

All response personnel are to be cautious of moving vehicles at all times and look in all directions before proceeding. Response personnel should be aware that all railroad tracks are in active use and should show extreme caution when operating in vicinity of tracks.

Report All Injuries require a immediate notification to Direct Supervisor.

Dry ice blasting Safety

Must utilize the following PPE: Tyvek Suit with Hood, appropriate gloves, steel-toed boots and ensure no skin is exposed. Ensure the operator of the gun has visual sight of the operator tending the machines or have someone in between to allow for stopping work when needed.

Hearing protection for all personnel within 30 feet of operation.

HISTORICAL/CULTURAL GUIDELINES

Leave cultural materials in place at the site of discovery, and mark its location.

Stop clean-up work in the vicinity surrounding the site, within a 6ft radius.

Immediately inform the field supervisor, who in turn, should immediately inform the FOSC and/or an appropriately designated cultural resource specialist. Obtain/provide location on map by indicating latitude/longitude.

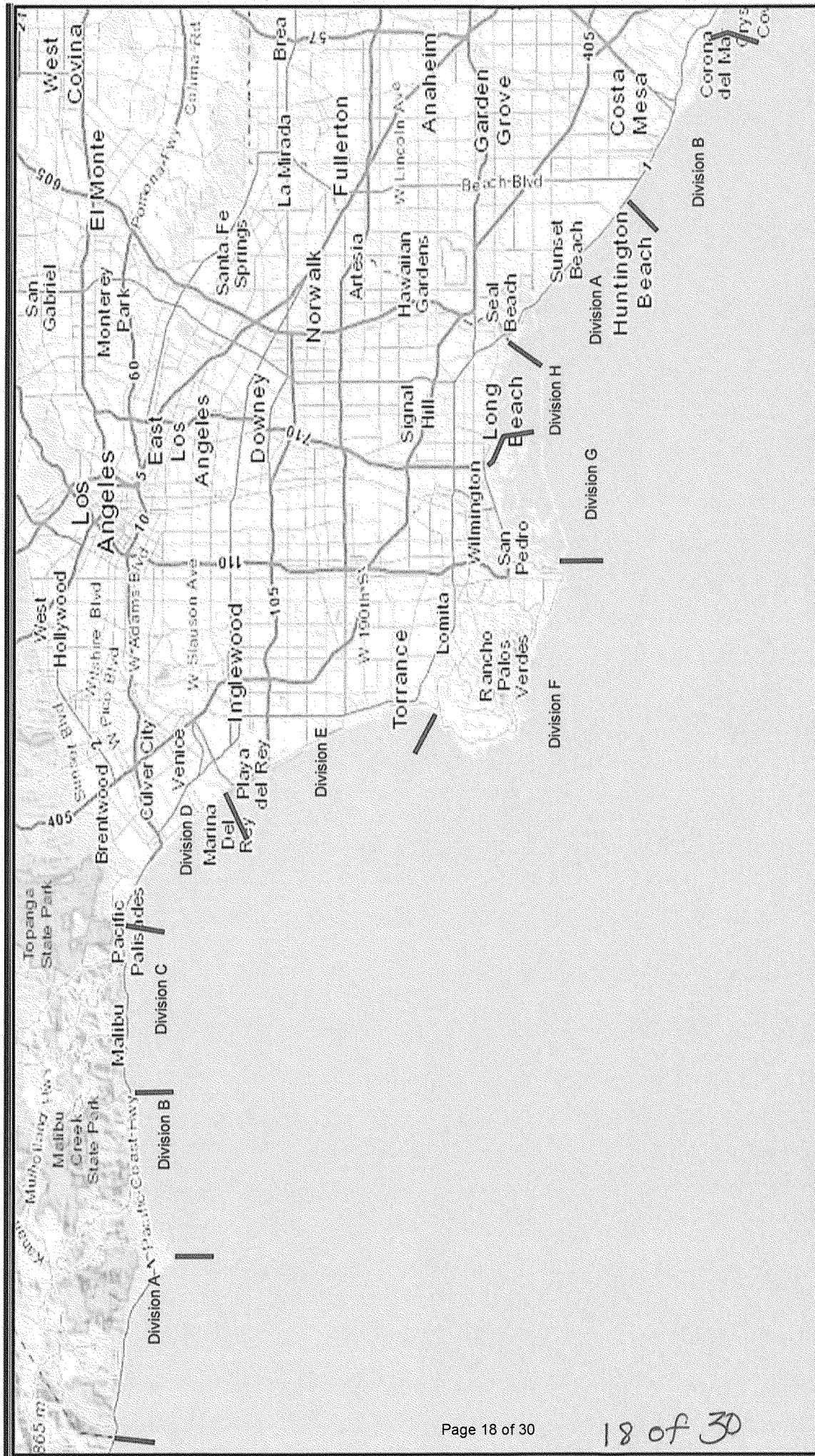
In the event a scheduled meal is not made available to your crew, report this immediately to your Branch Director and the Logistics Section Chief

No work in estuary or creek habitats without biological monitor and approval from EUL.

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio Freq./System/Channel	Phone	Cell/Pager
Emergency Communications			
Medical:	Evacuation:	Other:	

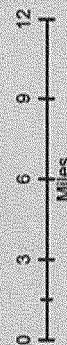
10. Prepared By	Date/Time	11. Reviewed By (PSC)	Date / Time	12. Reviewed By (OSC)	Date / Time
P. Gardner-Cox	07/09/2015 12:30	T. Haug/R. Andersen	07/09/2015 12:30	Drew Engstrom	
ASSIGNMENT LIST		07/09/2015 15:37		ICS 204-CG (Rev.10/07)	

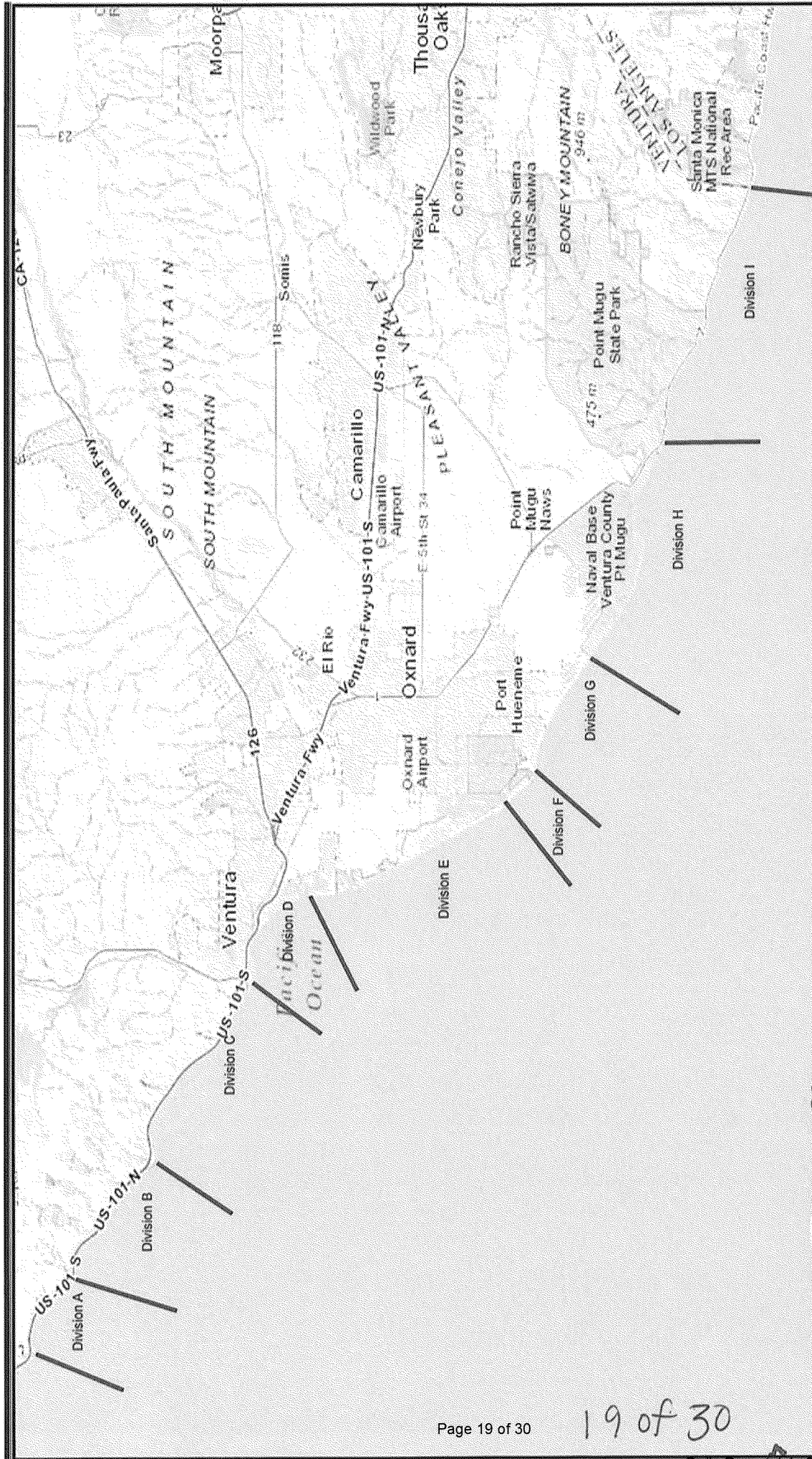


Overview Oiling Survey Assessment

South Team

Los Angeles / Orange Counties



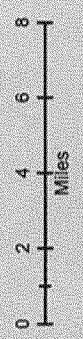
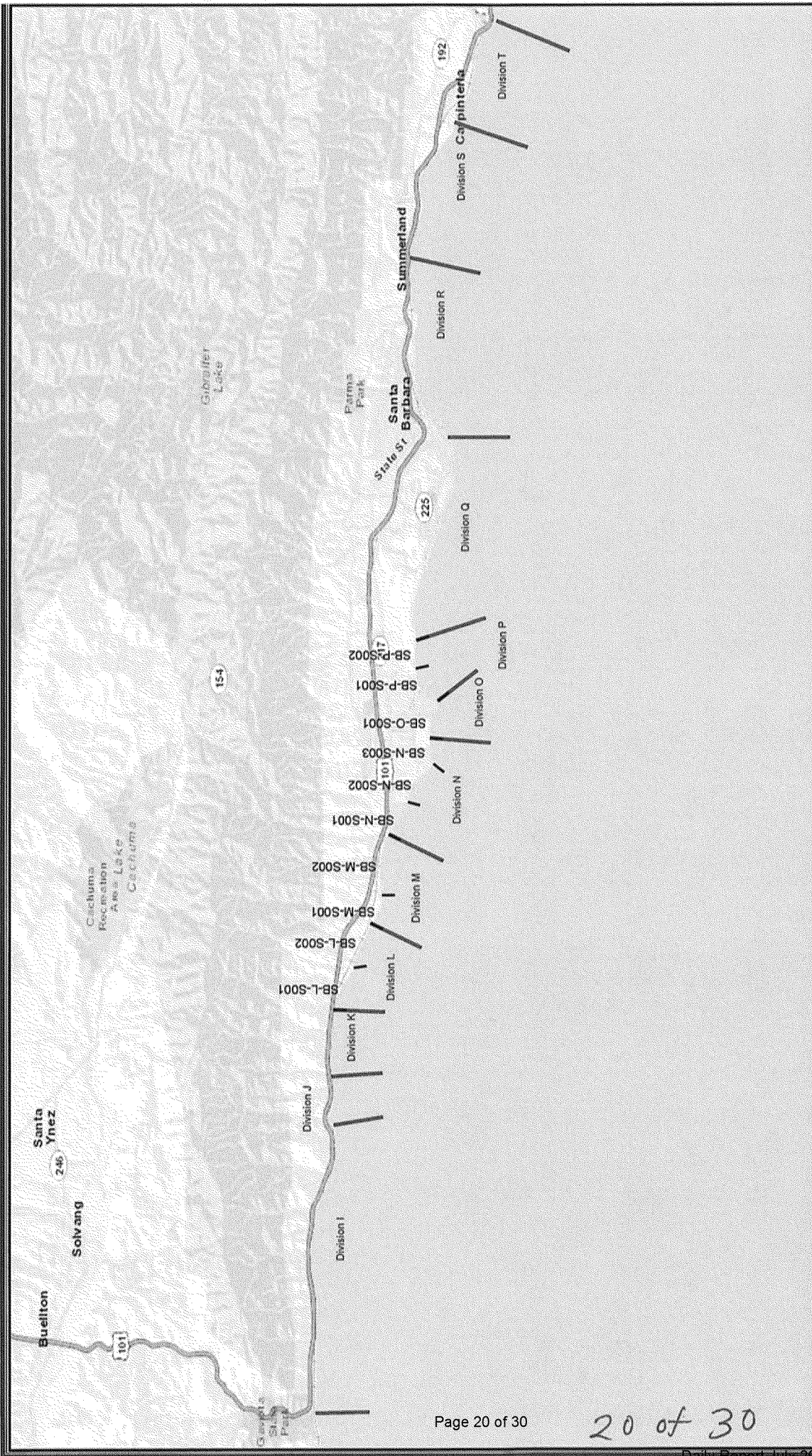


California Department of Fish and Wildlife
Office of Spill Prevention and Response

Overview Oiling Survey Assessment North Team 2 Ventura County

Data Source: OSPR GIS
Requestor: Mike Cornwell
Author: L. Guffy Gustafson
Date Created: 07/09/15

19 of 30



California Department of Fish and Wildlife
Office of Spill Prevention and Response



Data Source: QSPR GIS
Requestor: Mike Connell
Author: L. Gentry Gustafson
Date Created: 07/09/15

Overview Oiling Survey Assessment North Team 1 Santa Barbara County

20 of 30

1. Incident Name: Refugio Location: Mariposa Staging		2. Operational Period 21 (Date / Time) From: 07-10-2015 0600 To: 8-11-2015 0559		MEDICAL PLAN ICS 206-CG		
3. Medical Aid Stations						
Name	Location	Contact #	Transport Availability			
Catherine Murphy, Rn Medical unit Leader	Arroyo Quemada Site Field Nurse & Medical Unit Lead	210-784-8496	No			
Rodrigo Sanchez, EMTP	Refugio State Park EMTP	805-618-5769	No			
Chumash Fire Department	Gaviota Coast	Qun Tan Garcia 805-350-8819 805-832-2382	No			
Santa Barbara County Fire, water rescue, helicopter with hoist	4410 Cathedral Oaks, Santa Barbara, A	911	Yes			
Montecito and Carpinteria Fire Water Rescue Team	Santa Barbara County South	911	No			
Ventura Fire, Oxnard Fire, Ventura County Fire, water rescue, helicopter with hoist	Ventura County	911	No			
US Coast Guard, Medi-Vac, Rescue Swimmers	1001 South Seaside, San Pedro, CA 90731	855-562-4900 510-437-3701	Yes			
4. Transportation						
Ambulance Service	Address	Contact #	Care Capability			
American Medical Response	240 East Hwy 246 Buellton, CA 93117	805-245-3424	Paramedic/EMT team			
CALSTAR 7 (air medical transport team, no hoist)	3996 Mitchell Road Santa Monica, CA 93455	805-938-9038	Advanced Practice, 2 Nurse team			
Santa Barbara County Air Support (air medical transport team with hoist capabilities)	906 Airport Road Santa Ynez, CA 93460	805-692-5723 Or 911	2 Paramedic team with Rescue Swimmer			
Santa Barbara County Fire Rescue, Helicopter, Medical, water rescue and dispatch center	4408 Cathedral Oaks Road Santa Barbra	805-692-5723 or 911	Paramedic			
US Coast Guard	101 South Seaside Ave #20, San Pedro, CA 90731	855-562-4900 510-437-3701 VHF Channel 16	Rescue Swimmer/Medivac			
5. Hospitals						
Hospital Name	Address	Contact #	Travel Time		Burn Center	Helipad
			Air	Ground		
Goleta Valley Cottage Hospital	251 South Patterson Ave, Santa Barbara, CA 93111	805-967-3411	N/A	20/min		No
Grossman Burn Center	7300 Medical Center Drive West Hills CA	818-676-4177	20 min	1.25 hours	Yes	Yes
Santa Barbara Cottage Hospital (Anti-Venom is kept at this facility)	400 West Pueblo Street Santa Barbara, CA 93105	805-682-7111	8 min	27 min	No	Yes

Saint John Pleasant Valley Hospital	2309 Antonio Ave, Camarillo, CA 93010 Hyperbaric available Monday to Friday 0800-1800	(805) 389-5944	30	1 HR		
LA County Medical Alert (available 24/7)	200 UCLA Medical Plaza Suit B Los Angeles, CA 9005	1(866)940-4401	1 hour	N/A	No	Yes
UCLA Available 0800- 1700	200 UCLA Medical Plaza Suit B Los Angeles, CA 9005	310-794-9014	30 min.	1 hour	No	Yes

6. Special Medical Emergency Procedures:

1. If medical, injury or dive emergency occurs on boat, call 911 and report location geographically where the incident is located (GPS Coordinates). 911 will dispatch appropriate emergency resources to scene.
2. Non-life/limb threatening illness or injury: notify direct supervisor, follow "medical reporting procedures" and render first aid. Supervisor will direct worker to field nurse or EMT on site.
3. All illnesses and injuries will be reported on Incident Reporting Line 805-618-5769.
4. For any situation in need of Anti-venom, Please see Santa Barbara Cottage Hospital.

Essential reporting information for EMS provider:

1. Nature of injury
2. Location of patient and point of contact
3. Point of contact
4. Age and gender of patient

7. Prepared by: (ICP Safety Officer)
Art Loza, SOFR

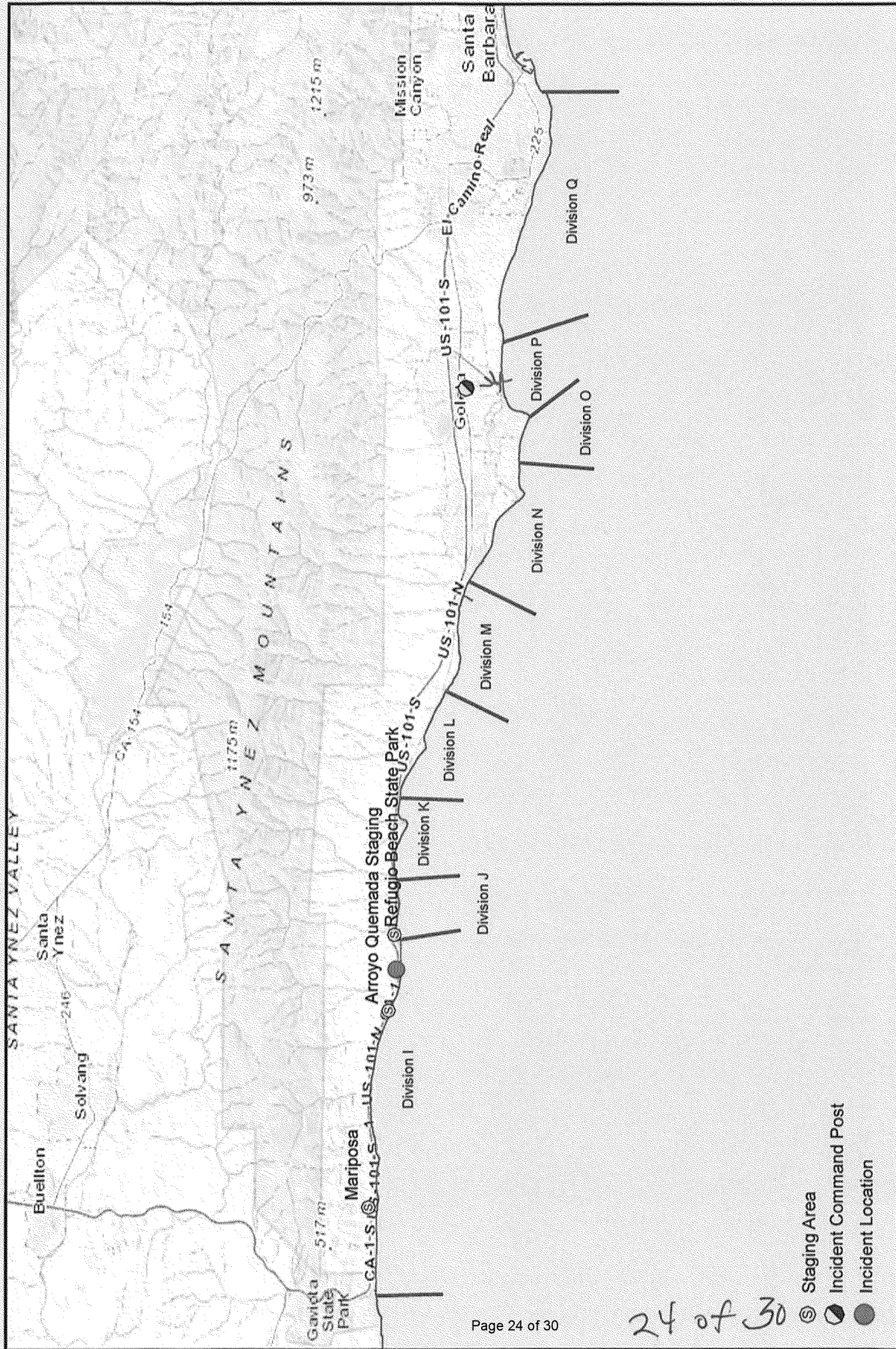
Date/Time
07/09/15

8. Reviewed by: (Safety Officer)

Date/Time


[Signature] 7/9/2015 0630

1. Incident Name Refugio Incident	2. Operational Period (Date/Time) From 07/10/2015 06:01 To 08/12/2015 06:00	Operational Period Ops Period 21	DAILY MEETING SCHEDULE ICS 230-CG
3. Meeting Schedule(Commonly-held meetings are included)			
Date/Time	Meeting Name	Purpose	Attendees
07/10/2015 07:00	Operations Briefing	Present IAP and assignments to the Supervisors/Leaders for the next Operational Period	UC, Cmd & General Staff, Branch Directors, DIV/GRP Supv, and Unit Leaders
07/10/2015 10:00	UC Meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
07/14/2015 10:00	UC meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
07/17/2015 10:00	UC Meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
07/21/2015 10:00	UC meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
07/24/2015 10:00	UC meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
07/28/2015 10:00	UC meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
07/31/2015 10:00	UC meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
08/04/2015 10:00	UC Meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
08/07/2015 10:00	UC meeting	Teleconference for UC, Command & General Staff to discuss ongoing issues.	UC, Cmd & General staff
08/11/2015 08:00	UC Objectives Meeting	Review and update objectives	Unified Command, PSC
08/11/2015 09:00	Command and General Staff Meeting	UC provide the command and general staff with updates on objectives and receives feedback/updates from staff.	UC, Command and General Staff, SITL, EUL
08/11/2015 12:00	Tactics Meeting	Develop/Review primary and alternate strategies to meet Incident Objectives for the next operational period.	PSC, OSC, LSC, FSC, RUL, SUL, SOFR, DOCL, COML and THSP
08/11/2015 16:00	Planning Meeting	Review status and finalize strategies and assignments to meet Incident Objectives for the next Operational Period. To include SCAT Briefing	IC/UC, Command & General Staff
08/11/2015 17:00	IAP Approval	Present the IAP to the Unified Command for approval.	IC/UC, PSC
4. Prepared by (Situation Unit Leader) Pete Gardner-Cox, RESL			
Date / Time 07/09/2015 11:00			
DAILY MEETING SCHEDULE		07/09/2015 11:14	ICS 230-CG (Rev 07/08)



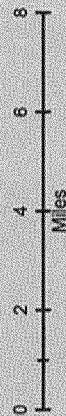
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Refugio Incident Situation Map 07 July 2015

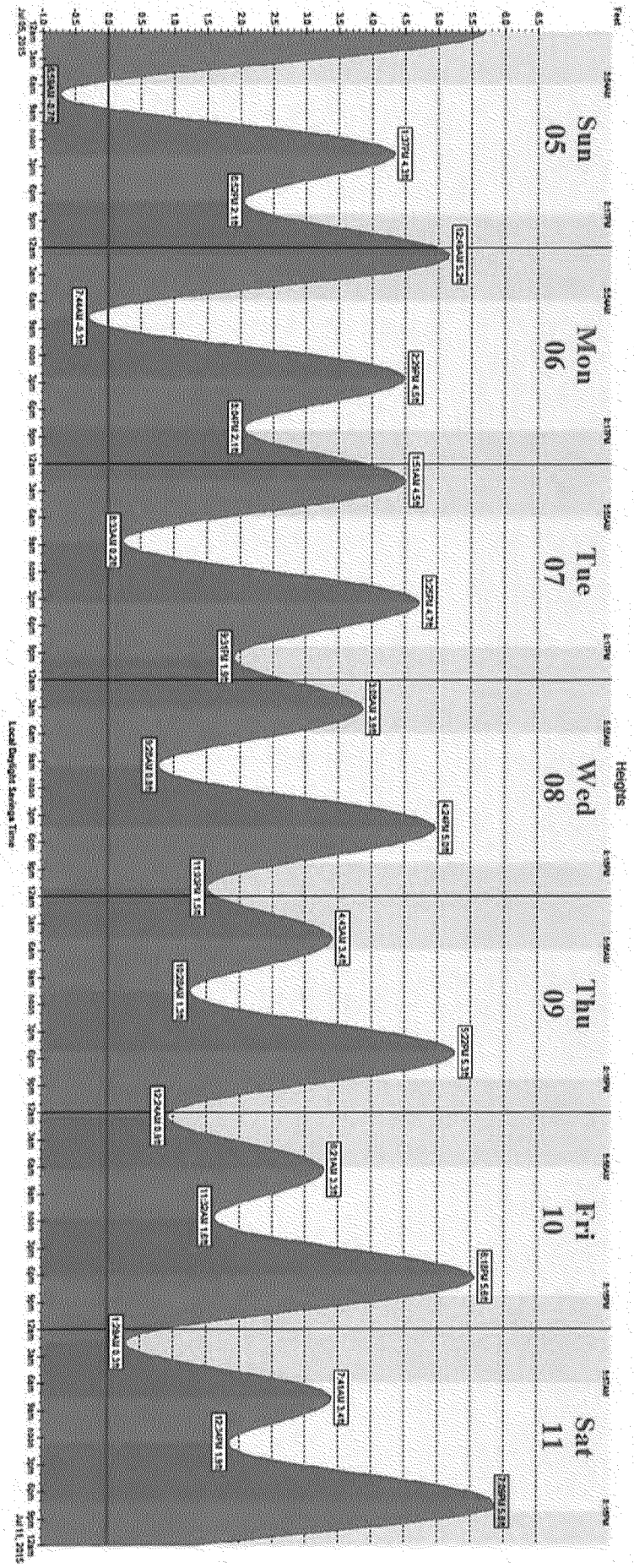

 Calif. Dept. of Fish and Wildlife
 Office of Spill Prevention and Response

Data Source: Situation
 Acquisition: SCAT Coordinator
 Author: L. Capry-Garrison
 Date Created: 07/09/15

HMD_1983_California_Trails_Atlas

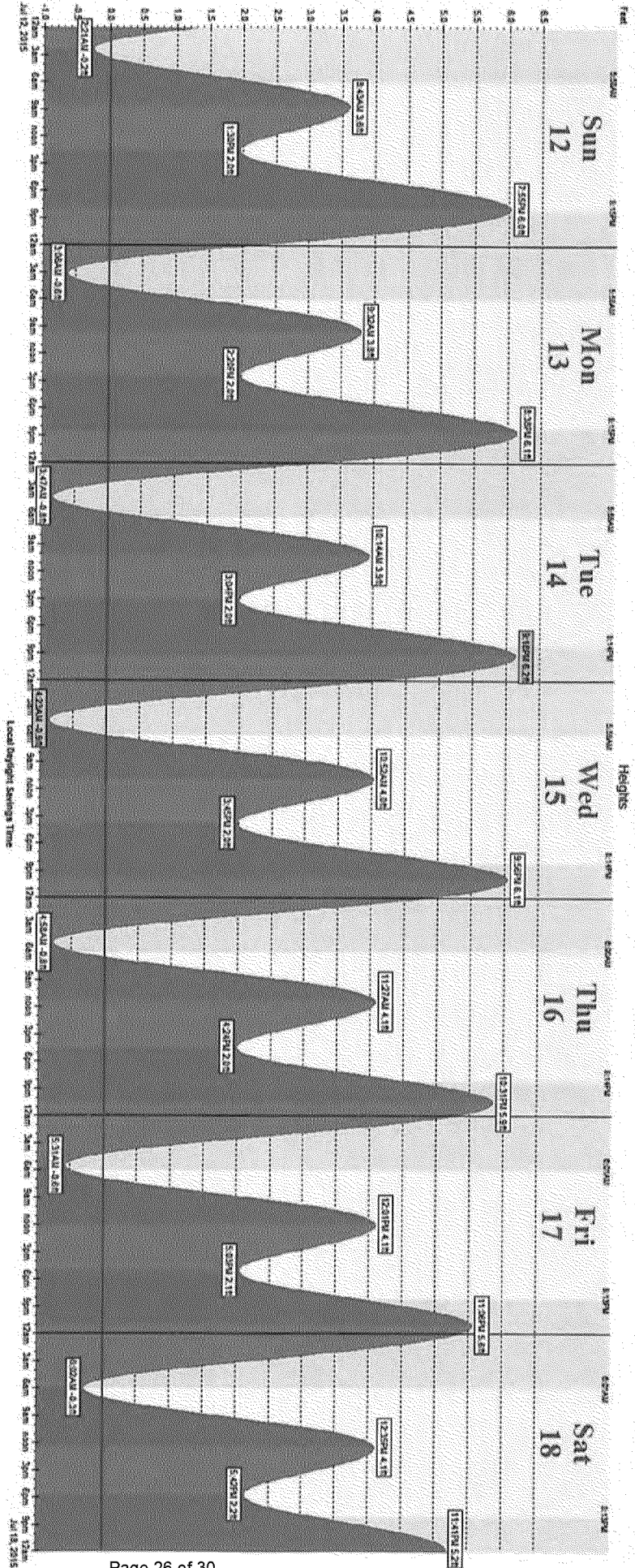


Total Heights at Garrett State Park, Santa Barbara Channel, CALIFORNIA
 Station No. 467 Latitude: 34° 28.10' N Longitude: 120° 13.70' W
 Based on L205 ANDELS
 From Sun Jul 05, 2015 to Sat Jul 11, 2015 (7 days) Local Daylight Savings Time



July 5th - 11th

Local Heights at Garfield State Park, Santa Barbara Channel, CALIFORNIA
 Station No. 465 Latitude: 34° 23.18' N Longitude: 120° 11.77' W
 Based on ICS ANGLEES
 From Sun Jul 12, 2015 to Sat Jul 18, 2015 (7 days) Local Daylight Savings Time



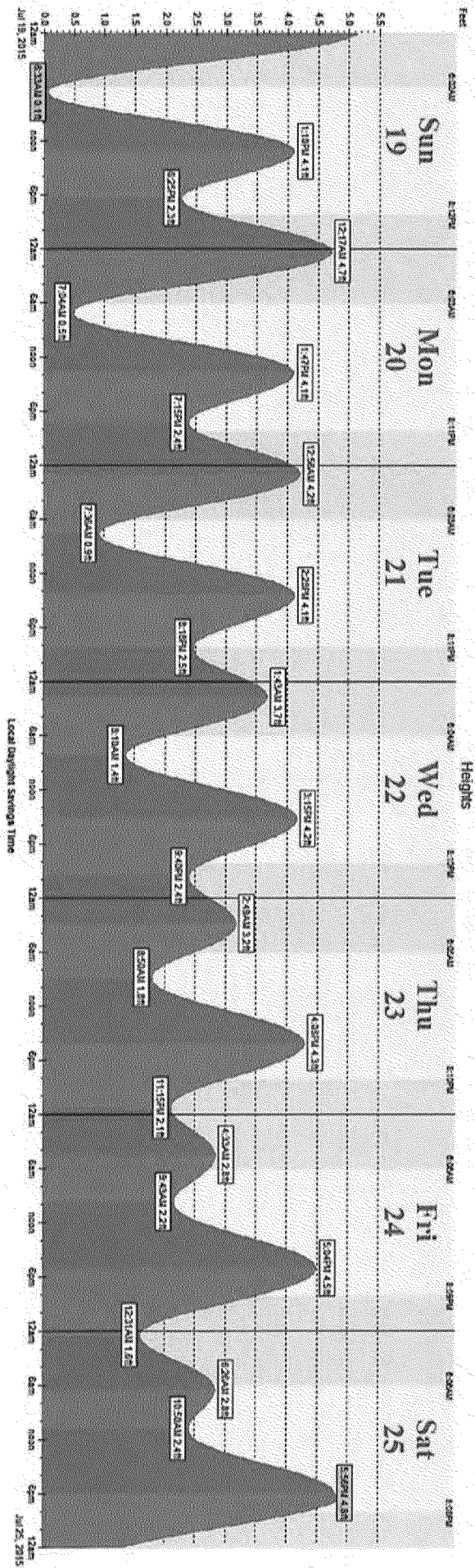
July 12TH - 18TH

Coronado State Park

Trail Heights at Coronado State Park, Santa Barbara Channel, CALIFORNIA
 Based on USGS data
 Location: 34° 22' 10" N Longitude: 120° 13' 19" W
 Based on LOS ANGELES
 From Sun Jul 19, 2015 to Sat Jul 25, 2015 (7 days)

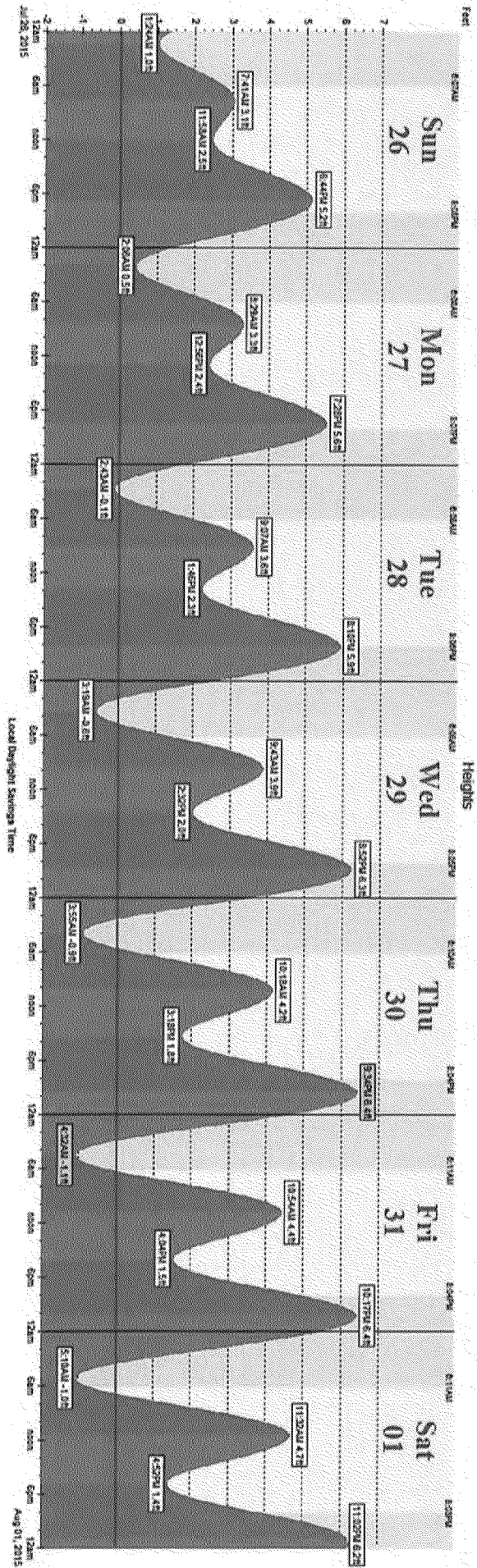
Local Daylight Savings Time

Shw 2.6.0



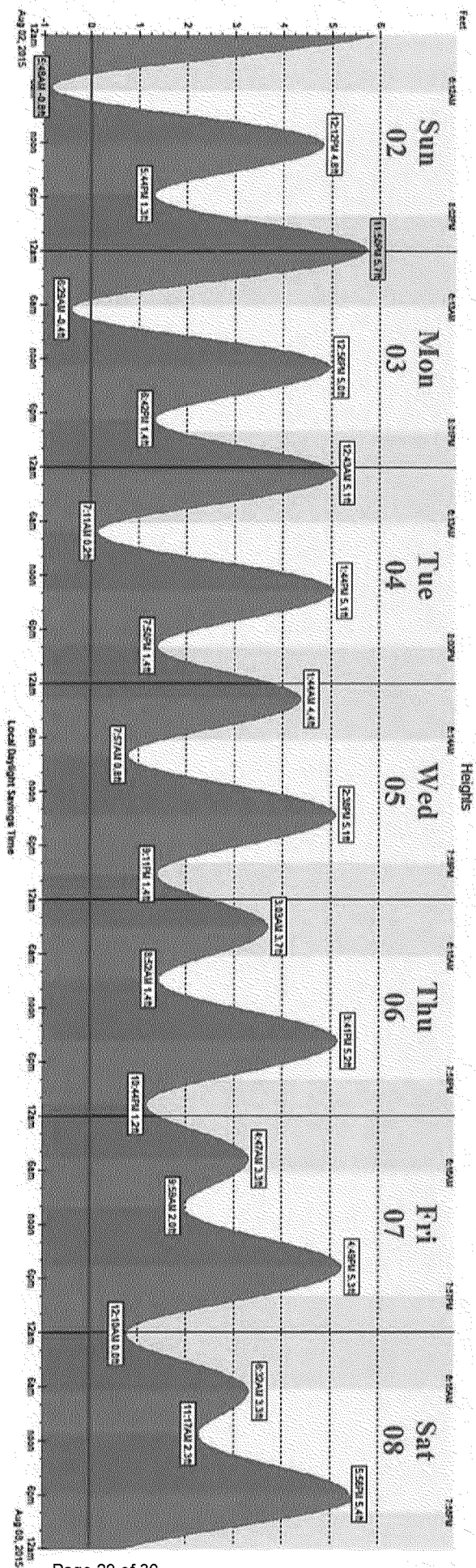
July 19th - 25th

Total heights at Genito State Park, Santa Barbara Channel, CALIFORNIA
 Station No. 451 Latitude: 34° 28.18' N Longitude: 120° 13.77' W
 Based on LOS ANGELES
 From Sun Jul 26, 2015 to Sat Aug 01, 2015 (7 days) Local Daylight Savings Time



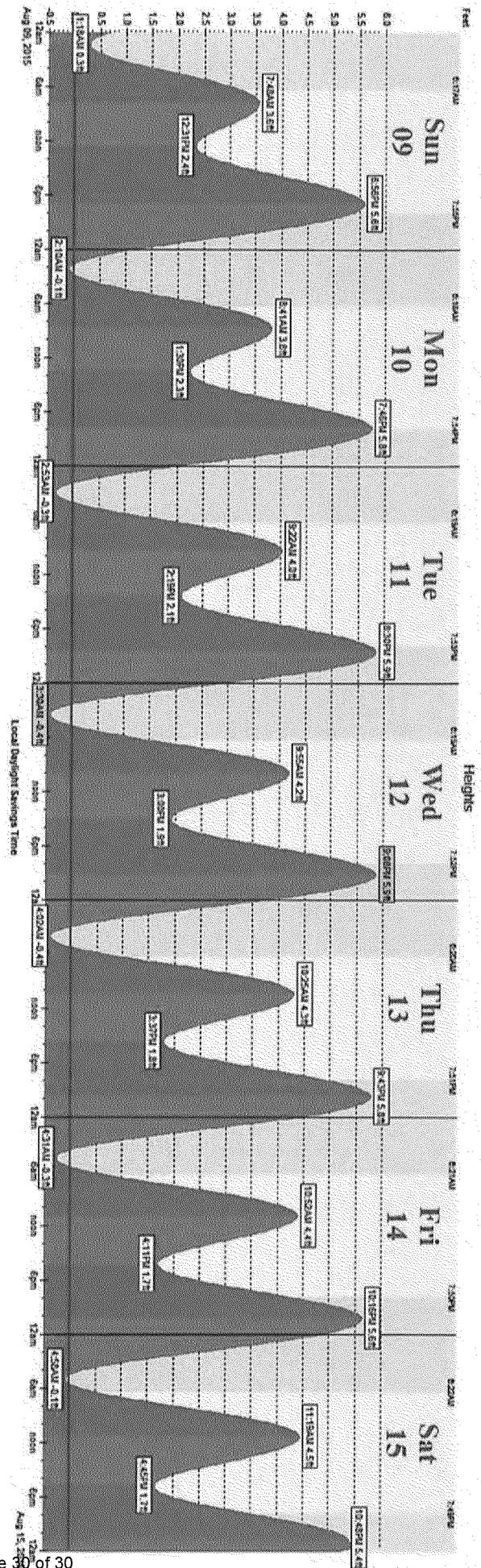
JULY 26TH - AUG. 01ST

Total height at California State Park, Santa Barbara Channel, CALIFORNIA
 Station No. 481 Latitude 34° 28.10' N Longitude 120° 13.72' W
 Based on LOS ANGELES
 From Sun Aug 02, 2015 to Sat Aug 08, 2015 (7 days) Local Daylight Savings Time



AUG. 2ND - AUG. 8TH

Tidal Heights at Garota State Park, Santa Barbara Channel, CALIFORNIA
 Station No. 451 Latitude 34° 23.13' N Longitude 120° 13.70' W
 Based on LOS ANGELES
 From Sun Aug 09, 2015 to Sat Aug 15, 2015 (7 days) Local Daylight Savings Time



Aug. 9th - 15th